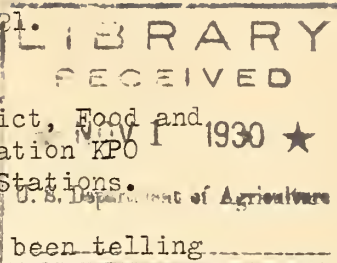


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A radio talk by W. W. Vincent, chief, Western District, Food and Drug Administration, delivered October 30, 1930 through Station KPO San Francisco, and other associated National Broadcasting Stations.

Good Morning, Friends! For twenty-one weeks I have been telling about your food and drug supplies. I have covered many classes of products - shown you the many ways in which the Federal Food and Drugs Act safeguards your food and drug supply and insures you a truthful branding of foods and drugs. Many of you are learning to read labels. You are learning what label statements mean. You are learning to judge the comparative values of different products.

I promised to talk about cheese to-day. I don't know much about cheese, although I have seen a lot of it in fifteen years spent in enforcing the Federal food and drugs act. I have inspected factories making Cheddar Cheese. I have inspected factories making French-type cheeses. I have inspected factories making cheese foods. And I have seen and examined the many varieties of imported cheeses that reach the United States. Don't be surprised that I don't know much about the subject. There is a lot to know. About 400 names are used to describe cheeses. Many of these names come from the place of original production.

When you talk about cheese, you need go back a long way. There are references to it dating back to 1400 B.C. The early Greeks and Romans were making cheese before they knew how to make butter. Unless it might be dried fruit, I think of no older manufactured food product. The commercial manufacture of cheese in this country dates back to about 1850. Prior to that time, most of the cheese was manufactured by the farmer or his wife. Cheese-making in the early days was pretty much of a gamble. The home manufacturer could not know how each batch might turn out. You ask why. Well, he knew nothing of bacteria. And he knew very little of the part that molds play in determining characteristics of the finished cheese. To-day, in some factories, the desired bacteria and molds are artificially cultivated and added to the cheese in its manufacture to secure the characteristic flavor desired. Mention of bacteria and cheese - together with the fact that we often hear cheese spoken of as "strong enough to walk" - recalls a little story credited to the Boston News Bureau:

"A retail grocer was before the court charged with having beaten up a food inspector. He plead guilty and offered the following as mitigating the offense. All morning he had been bothered by various inspectors. They had checked his scales, tasted his butter, looked over his income tax returns and tested his gasoline. Finally, the food inspector appeared. He wanted to take moving pictures of the cheese."

Well, folks, that goes a little strong, but I could tell you a number of interesting stories about the activities of your Federal food and drug agents in the cheese field. They have removed many lots of cheese from the channels of commerce because it was bad for your pocketbook when the manufacturer gave you too much water and too little milk fat in the product. They have seized other lots because of decomposition. Some manufacturers have been prosecuted because they labeled their products in such a manner as to lead you to believe them imported products, when such was not the case.

The cheese business is big. We imported in 1929 about 83 million pounds. The estimated production for the United States in 1928 was around half a billion pounds. This is such a big subject that I will have to talk twice about it. First, I want to tell you of some recent developments in the cheese business.

It's becoming difficult to buy old-fashioned cheese of the more common varieties in many of our retail stores. You can buy "Process Cheese" and you can buy cheese foods. These latter are essentially cheese products, but usually contain added milk, sugar, skim milk powder and quite often added water. They are sold under coined, or fanciful, names and are enjoying a wide sale now due to the fact that they spread readily, and are available in packages of convenient size.

Do you know what "Process Cheese" or "Emulsified Cheese" is? When labeled as such, unqualified, it is a Cheddar Cheese modified by grinding and mixing one or more lots of Cheddar cheese into one plastic mass. This is done with the aid of heat -- with or without the addition of water -- and with the incorporation of not more than 3% of a suitable emulsifying agent. The product contains not more than 40% of water and, in a dry condition, when allowance is made for the water, not less than 50% of milk fat. If a variety of cheese other than Cheddar is used, the term "Process Cheese" must be modified by the name of the variety employed: for example, "Swiss Process Cheese." Some labels read "Pasteurized Cheese," or "Pasteurized Blended Cheese." That is the clean, sound, pasteurized product made as above-described, except that no emulsifying agent or water is used in its preparation. If no varietal name is employed, you may assume the product is a pasteurized Cheddar Cheese, or blended Cheddar Cheese, as the label may indicate. The emulsifying agents used in manufacturing "Process Cheese" are harmless products. All the 400 names given to cheeses may be grouped into about 18 different varieties. In France, for example, they have about 250 different names for cheese made in different localities. Actually, about six distinct varieties are manufactured there.

Before discussing varieties, you should know the definition for cheese. The Federal standard calls for: "The sound product made from curd, obtained from the whole, partly skimmed, or skimmed milk of cows, or the milk of other animals, with or without added cream, by coagulating the casein with rennet, lactic acid, or other suitable enzyme or acid, and with or without further treatment of the separated curd by heat or pressure, or by means of ripening ferments, special molds, or seasoning." The term, "Cheese," unqualified, as applied in the United States, is understood to mean "Cheddar Cheese," American Cheese or American Cheddar Cheese.

Whole milk cheese, erroneously called "Full Cream" Cheese, is made from whole milk.

Partly skimmed milk cheese is made from partly skimmed milk. Skimmed Milk Cheese is made from skimmed milk.

The more common whole milk cheeses are "Cheddar," Limburger, Brick, Stilton, Guoda, Roquefort, Neufchatel and Gorgonzola.

Cheeses which are sometimes made from whole milk and sometimes from partly skimmed milk include Edam, Swiss Cheese, Camembert and Brie. Typical examples of cheeses which are nearly always made from partly skimmed milk are Parmesan and Bra.

Cheeses always made from skim milk include Holstein, Sapsago, Gammelost and Cottage Cheese, or Schmierkase.

Cream Cheese is unripened cheese, made by the Neufchatel process from whole cow's milk which has been enriched with cream. You generally find this in small loaves which weigh from 3 to 4 ounces and are nicely wrapped in tinfoil.

The names you see denote the kind of cheese, that is, whether whole milk, partly skimmed or skimmed milk cheese. Those ordinarily made from skimmed milk or partly skimmed milk, are not required to be labeled as to character of milk used. Those customarily made from whole milk are required to be plainly labeled as "Made from partly skimmed", or "Skimmed Milk", when such is a fact. The names give you additional information, providing you know your cheese. They tell you whether the cheese was made from sheep's milk, goat's milk, reindeer's milk, buffalo's or camel's milk. Cheese can be made from the milk of any animal. The name further denotes whether the cheese is hard or soft. Hard cheeses include the varieties used for grating--also the solid, plastic cheese, such as Cheddar. The main difference between hard and soft cheese is largely in the amount of whey left in the curd during manufacture. As a matter of fact, the two groups merge into each other and some varieties are classed as hard by some and as soft by others. The manufacture of good cheese requires the use of good milk and clean factories. You will usually find your cheese factories very close to the sources of milk production.

In order to help you to buy cheese with intelligence and discrimination, I will now give you some information on the more common varieties. Since many definitions include rennet, I should first tell you that the rennet used in cheese-making is obtained by extracting the true digestive stomach of the calf with a salt solution. The rennet extract so obtained contains two enzymes: a clotting or curdling enzyme, termed "Rennin"--and a proteolytic enzyme, pepsin.

Cheddar Cheese, or American Cheese, or American Cheddar Cheese, is generally sold in round flat shapes sometimes called "daisies", "flats" and "Young Americans". It is also put up in loaves, and the "Longhorn", which is a Cheddar Cheese, is a long round cheese as the name implies. Cheddar Cheese is made from heated and pressed curd, obtained from whole cow's milk by the action of rennet. The standard specifies a moisture limit of no more than 39% water and not less than 50% of milk fat in the dry substance. These cheeses are covered with cloth and paraffine. Color varies from white to yellow. They have a close texture and a mild or sharp flavor, depending upon ripeness. Cheddar Cheeses produced in the United States vary in weight from about 20 to 80 pounds. Cheddar Cheese is the product most generally employed in the manufacture of the cheese foods and process cheeses I mentioned.

Cheddar Cheese, essentially an American product, takes its name from Cheddar, England, where it was first made. It is usually artificially colored. Label declaration, showing the presence of artificial color on hard cheeses, is not necessary because of special legislation passed by Congress in 1896. The Administration is seeking further interpretation of the law in an effort to determine if special legislation of this character can set aside the Provisions of the Food and Drugs Act should the artificial color serve to conceal inferiority. The Food and Drug Administration does not permit the use of artificial color in cream cheese and cottage cheese under circumstances where it would convey the impression that a greater amount of milk fat was present than was actually the case.

Well, folks, my time is about up. Next week I will tell you more about cheese. I will tell you what those figures 20+, 30+, 40+, mean when observed upon cheeses manufactured in the Netherlands. I will tell you about Limburger, Parmesan, Camembert-- how they get those holes in Swiss Cheese--how they grow the molds on bread crumbs and introduce the mold into the Roquefort Cheese which is a sheep's milk product. I will also tell you something of the chemistry and the microbiology of cheese manufacture.

This concludes my twenty-first talk. If you are interested in receiving this information on cheese and the many other food products of which I have told you, drop a post card to W. W. Vincent, care of this station, or to the U. S. Food and Drug Laboratory, San Francisco. A study of this material will make you an intelligent and discriminating buyer.
